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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/488,351	01/20/2000	Terry L. Cole	2000.023000	4297
23720	7590	02/04/2008		EXAMINER
WILLIAMS, MORGAN & AMERSON				AHN, SAM K
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			02/04/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	09/488,351	COLE, TERRY L.
	<b>Examiner</b>	<b>Art Unit</b>
	Sam K. Ahn	2611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 21 November 2007.  
 2a) This action is FINAL.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 2-32,35 and 36 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) 2-11 and 28 is/are allowed.  
 6) Claim(s) 12-27,29-32,35 and 36 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 20 January 2000 is/are: a) accepted or b) objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 5) <input type="checkbox"/> Notice of Informal Patent Application |
|  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### ***Response to Arguments***

1. Applicants' argument have been fully considered. Instead of the previously indicated MPEP chapter of chapter 2181, the correct chapter 2114 has been copied below. Therefore, the applicants' argument of "determining a training parameter... performing training... and providing the training parameter..." do not provide structurally distinguishable apparatus from the prior art, in this case Samson in view of Wiese, as below.

## **2114 Apparatus and Article Claims - Functional Language [R-1]**

For a discussion of case law which provides guidance in interpreting the functional portion of means-plus-function limitations see MPEP § 2181 <2100\_2181.htm> - § 2186 <2100\_2186.htm>.

### **APPARATUS CLAIMS MUST BE STRUCTUR-ALLY DISTINGUISHABLE FROM THE PRIOR ART**

>While features of an apparatus may be recited either structurally or functionally, claims< directed to >an< apparatus must be distinguished from the prior art in terms of structure rather than function. >*In re Schreiber*, 128 F.3d 1473, 1477-78, 44 USPQ2d 1429, 1431-32 (Fed. Cir. 1997) (The absence of a disclosure in a prior art reference relating to function did not defeat the Board's finding of anticipation of claimed apparatus because the limitations at issue were found to be inherent in the prior art reference); see also *In re Swinehart*, 439 F.2d 210, 212-13, 169 USPQ 226, 228-29 (CCPA 1971);< *In re Danly*, 263 F.2d 844, 847, 120 USPQ 528, 531 (CCPA 1959). "[A]pparatus claims cover what a device *is*, not what a device *does*." *Hewlett-Packard Co. v. Bausch & Lomb Inc.*, 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990) (emphasis in original).

### **MANNER OF OPERATING THE DEVICE DOES NOT DIFFERENTIATE APPARATUS CLAIM FROM THE PRIOR ART**

A claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus" if the prior art apparatus teaches all the structural limitations of the claim. *Ex parte Masham*, 2

USPQ2d 1647 (Bd. Pat. App. & Inter. 1987) (The preamble of claim 1 recited that the apparatus was "for mixing flowing developer material" and the body of the claim recited "means for mixing ... , said mixing means being stationary and completely submerged in the developer material". The claim was rejected over a reference which taught all the structural limitations of the claim for the intended use of mixing flowing developer. However, the mixer was only partially submerged in the developer material. The Board held that the amount of submersion is immaterial to the structure of the mixer and thus the claim was properly rejected.).

**A PRIOR ART DEVICE CAN PERFORM ALL THE FUNCTIONS OF THE APPARATUS CLAIM AND STILL NOT ANTICIPATE THE CLAIM**

Even if the prior art device performs all the functions recited in the claim, the prior art cannot anticipate the claim if there is any structural difference. It should be noted, however, that means plus function limitations are met by structures which are equivalent to the corresponding structures recited in the specification. *In re Ruskin*, 347 F.2d 843, 146 USPQ 211 (CCPA 1965) as implicitly modified by *In re Donaldson*, 16 F.3d 1189, 29 USPQ2d 1845 (Fed. Cir. 1994). See also *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1951 (Fed. Cir. 1999) (The claims were drawn to a disposable diaper having three fastening elements. The reference disclosed two fastening elements that could perform the same function as the three fastening elements in the claims. The court construed the claims to require three separate elements and held that the reference did not disclose a separate third fastening element, either expressly or inherently.).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 12-14, 16,17, 21-25, 28, 29, 35 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Samson US 5,881,102 and Wiese et al. US 6,434,119 B1 (Wiese, cited previously).

Regarding claim 12, Samson teaches establishing a communication channel between a first transceiver and a second transceiver (see Fig.3) in low power

mode (note c.4, I.29 and c.6, I.14-24); determining at the first transceiver, a training parameter (training such by flagging for software or through flip flop for hardware, low power state can be achieved wherein some of the modem's functions are shut down, note c.4, I.29-31), performing training, at the first transceiver, based at least on the training parameter (note c.6, I.33-35 wherein the modem is switched to low power mode and note c.4, I.29-31 wherein when low power mode, training is performed by shutting down some of the functions); and providing the training parameter that is used in training of the first transceiver to the second transceiver (note c.5, I.51-53 sending state signal to the second transceiver). However, Samson does not explicitly teach the training parameter is determined in response to establishing the communication channel in the low power mode.

Wiese teaches, in the same field of endeavor, a method and apparatus comprising establishing a communication channel between a first transceiver and a second transceiver in low power mode, (note col.6, lines 16-33) wherein Wiese teaches transmission of an initialization signal at a lower power level or in a low power mode, and increasing the power level until the signal is received by the other transceiver.

Hence both Samson and Wiese teach establishing communication between two transceivers in low power mode, wherein Wiese further suggests increasing the power level of transmission until signal is received. Therefore, it would have been obvious to one skilled in the art at the time of the invention to initialize the

communication channel in low power in the system of Samson for the purpose of reducing power consumption and potentially minimize interference with other modem lines that may be affected as noise when high powered signaling is performed, as taught by Wiese (note col.6, lines 16-33).

Regarding claim 13, Samson in view of Wiese teach all subject matter claimed, as applied to claim 12. Wiese further teaches transmitting and receiving data with the transceiver (VTU-R) (see Fig.5).

Regarding claim 14, Wiese further teaches wherein transmission of remote initialization signal at a relatively low power level and incrementing until the signal is detected. (note col.6, lines 16-30) Therefore, it is inherent that the increment of level of power taught by Wiese is the smallest amount of power acceptable, since the signal is acceptable only after it has been detected.

Regarding claim 16, Wiese further teaches computation of signal to noise ratio for determining the training parameter. (note claim 10) Signal to noise ratio includes determination of phase and amplitude distortion, and therefore it is inherent that the training parameters include determining phase and amplitude distortion of the communication channel.

Regarding claim 17, the claim is rejected as applied to claim 16 with similar scope.

Regarding claim 21, the claim is rejected as applied to claim 12 with similar scope.

Regarding claim 22, Wiese further teaches wherein the first and second transceiver is a DSL modem (note c.1, l.45, conforming to ADSL standard).

Regarding claim 23, the claim is rejected as applied to claim 22 with similar scope.

Regarding claim 24, the claim is rejected as applied to claim 14 with similar scope.

Regarding claim 25, the claim is rejected as applied to claim 16 and 17 with similar scope.

Regarding claim 29, the claim is rejected as applied to claim 14 with similar scope.

Regarding claim 35, the claim is rejected as applied to claim 12 with similar scope.

Regarding claim 36, the claim is rejected as applied to claim 12 with similar scope.

3. Claims 15 and 30-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Samson US 5,881,102 and Wiese et al. US 6,434,119 B1 (Wiese, cited previously) and Palm US 6,751,254 B1 (cited previously).

Regarding claim 15, Samson in view of Wiese teach all subject matter claimed, as applied to claims 2 or 13, however, do not explicitly disclose power cutback in the range of 0-30 dB.

Palm teaches power adjustments wherein during initialization, power levels are incremented in the increments of 2 dB, a predetermined level. (note col.6, lines 27-43) Therefore, it would have been obvious to one skilled in the art at the time of the invention to implement Wiese's teaching of initializing the communication channel in low power mode by incrementing in 2 dB, as taught by Palm, for the purpose of appropriately incrementing, without incrementing too rapidly, nor incrementing too slowly, and establish connection.

Regarding claim 30, the claim is rejected as applied to claim 15 with similar scope.

Regarding claim 31, the claim is rejected as applied to claim 15 with similar scope.

Regarding claim 32, the claim is rejected as applied to claim 15 with similar scope.

4. Claims 18-20,26 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Samson US 5,881,102 and Wiese et al. US 6,434,119 B1 (Wiese, cited previously) and Olafsson USP 5,870,438 (cited previously).

Regarding claim 18, Samson in view of Wiese teach all subject matter claimed, as applied to claim 17 or 25, however, do not explicitly teach wherein determining the training parameter includes a transmitter characteristic of the second transceiver including a symbol timing, carrier frequency, and carrier phase of the transmitter.

Olafsson teaches fast synchronization in a modem, and further teaches wherein the training parameter includes the transmitter characteristic of a symbol timing, carrier frequency, and carrier phase of the transmitter (note col.1, lines 29-37). Therefore, it would have been obvious to one skilled in the art at the time of the invention to include the training parameters taught by Olafsson in Samson in view of Wiese's training parameter for the purpose of increasing data transmission at a high data rate (note col.1, lines 37-39).

Regarding claim 19, the claim is rejected as applied to claim 18 with similar scope.

Regarding claim 20, the claim is rejected as applied to claim 18 with similar scope.

Regarding claim 26, the claim is rejected as applied to claim 18 with similar scope.

Regarding claim 27, the claim is rejected as applied to claim 18 with similar scope.

***Allowable Subject Matter***

5. Claims 2-11 and 28 are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sam Ahn whose telephone number is (571) 272-3044. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad Ghayour can be reached on (571) 272-3021. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Sam K. Ahn  
Patent Examiner

1/29/08